

Ad Hoc Natural Gas Vehicle Industry Infrastructure Working Group



Winter 2000 Meeting
Rajeana Gable, Managing Director

Winter NGV-IWG Meeting

March 2 and 3, 2000

- **Focus of this Meeting:**
 - **Implementation of Action Plans through Working Sessions of the CNG and LNG Task Forces**
 - **Update on LNG Market for Transportation Uses**
 - **Explore Cooperative Government/Industry Opportunities in Advanced Fueling Appliance Technologies**
 - **Develop recommendations for new programs for FY2001**
 - **Recommendations for new manufacturer and industry participants**



Organization of NGV-IWG

- The NGV Industry Infrastructure Working Group was formed in November 1998 to *identify technical obstacles to a self-sustaining NGV infrastructure and develop plans and programs to overcome them*
- The IWG is composed of over 50 individuals from industry and government who have demonstrated a commitment to working on the ad hoc group and providing investment and in-kind resources to ensure its success



Objectives and Activities of the NGV-IWG

- **Establish the NGV Infrastructure Technology Agenda for the industry, prioritize technical barriers and issues, and develop plans to address them**
- **Establish a business basis for NGV infrastructure that will examine required rates of return on investment in infrastructure and fueling station related technology**
- **Recommend to GRI and the DOE specific projects to be undertaken and goals for the projects based upon task force recommendations**

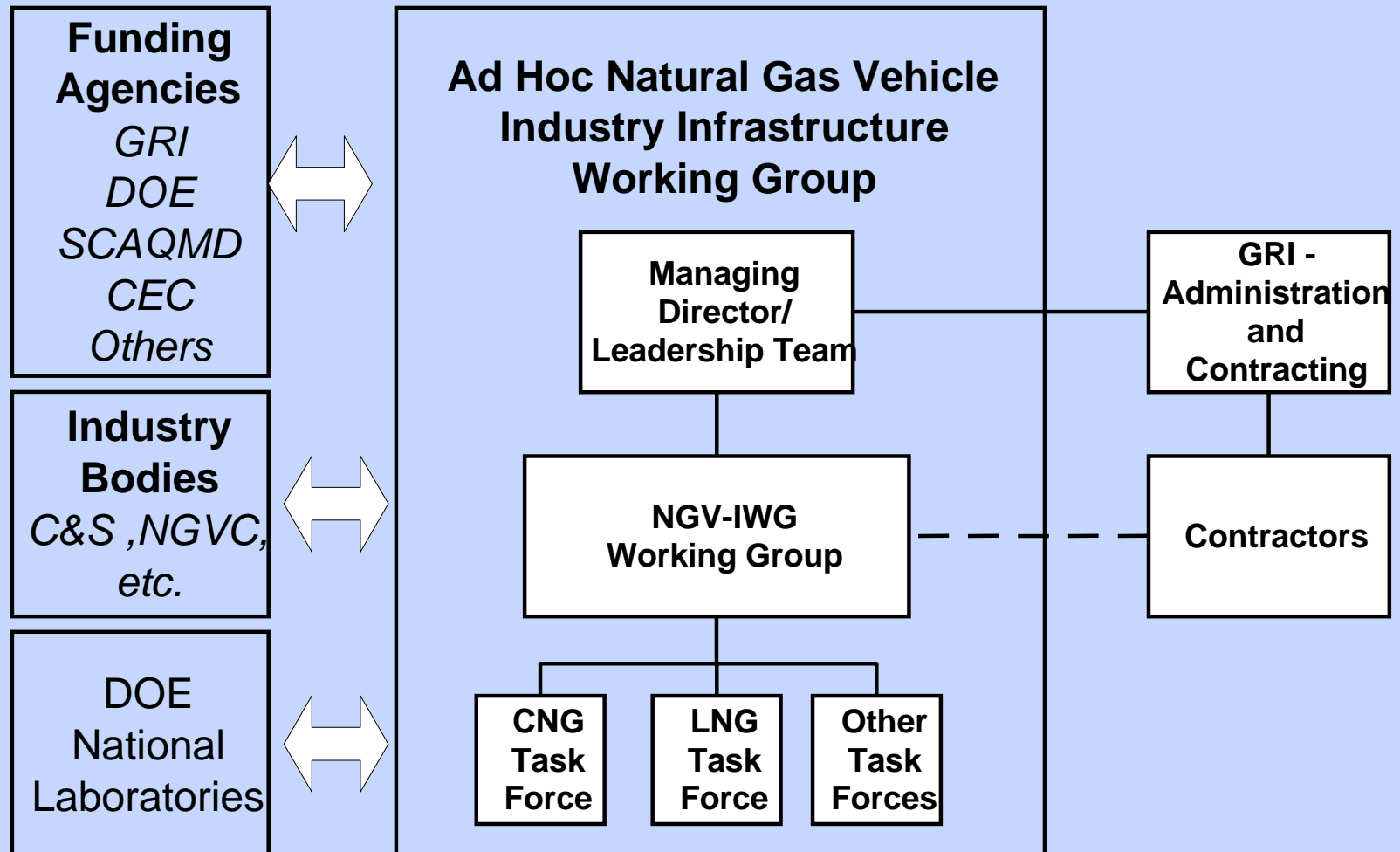


Objectives and Activities of the NGV-IWG (continued)

- **Secure industry resources to be offered as matching contributions to GRI and DOE funding for projects**
- **Coordinate work on technical barriers with the NGV industry actions on business and government issues**
- **Promote dissemination of information on infrastructure technology**



Structure of the NGV-IWG



Developing Process:

Review and Assessment of Obstacles and Requests

- **New technology obstacles, issues and requests should be brought to the attention of the Managing Director**
 - Review and Assign to Task Force
 - Suggest New Task force if Needed
- **Assessment by Task Force**
 - Develop recommendations for disposition
 - Recommend for funding
 - Recommend further examination
 - Recommend referral to another body
 - Document recommendation (statement of work, letter of referral, etc.)



Developing Process:

Review and Assessment of Obstacles and Requests

- **Review and discussion by NGV-IWG**
 - Review and prioritize obstacles and requests
 - Submit recommendation for disposition to Leadership Team with comments and suggestions
- **Action by Leadership Team**
 - Evaluate recommendations and priorities
 - Determine method of funding and contracting
 - Seek/assemble funding package
- **Action by GRI**
 - Finalize and Issue RFPs
 - Review proposals and select contractors
 - Issue and monitor contract



Roles and Responsibilities:

NGV-IWG Working Group

- **Review technology obstacles and industry issues**
- **Establish consensus on Task Force priorities and assignments**
- **Oversee and coordinate Task Force activities**
- **Review Task Force recommendations**
- **Recommend formation of new Task Forces**
- **Recruit Membership**
- **Compile and report on Task Force recommendations**
- **Serve to provide industry/government unity and consensus regarding the Program agenda and plan**



Roles and Responsibilities:

Task Forces

- **Identify program specific activities**
- **Review requests and project requirements, specific to the Task Force charge**
- **Seek industry input on obstacles and requests**
- **Recommend actions and referrals**
 - Recommend for funding
 - Recommend further examination
 - Recommend referral to another body
- **Develop draft Statements of Work, Referral Letters, etc.**
- **Review and report progress**

Roles and Responsibilities:

Managing Director and the Leadership Team

- **Provide organization and structure**
- **Establish membership**
- **Define and address technology obstacles and issues**
- **Direct Task Force review and recommendation process**
- **Organize new Task Forces as needed**
- **Compile and prioritize Task Force recommendations**
- **Seek and organize funding and cofunding**
- **Support the Program Solicitation and RFP process**
- **Recommend a review process and review criteria**



Roles and Responsibilities:

GRI Administration and Contracting

- **Administration of NGV-IWG programs and activities**
- **Establish IWG web page within GRInet**
- **Issue and manage program solicitation and RFP process**
- **Manage selection process**
- **Issue contracts**
- **Manage contracts**



Participation in the NGV-IWG Winter Meeting - March 2000

Utility/Fuel Distributor	9
Fueling Equipment Manufacturer/Supplier	6
GRI/SCAQMD/DOE/CEC/Funding Agencies	7
Consultants/University	14
National Laboratories	8
Vehicle Manufacturer/Supplier	2
Fleet Operator	2
Industry Group/Coalitions	2
<i>Total</i>	<i>50</i>



1999 IWG Results

- The IWG developed and presented its first report to DOE and GRI in August of 1999 titled
 - *Recommendations for Programs to Overcome Obstacles to a Sustainable NGV Fueling Infrastructure*
- GRI, DOE and the Natural Gas Industry assembled a package of over \$ 6.085 million to fund the recommended infrastructure RD&D programs in FY2000



Recommended Programs and Projects

***Three “Infrastructure Programs” are underway,
consisting of fifteen projects***

- LNG Infrastructure Program
 - 6 Projects
- CNG Infrastructure Program
 - 6 Projects
- Infrastructure Technical Strategy Program
 - 3 Projects



LNG Infrastructure Program

- **Small-Scale Liquefaction Plant**
- **Low-cost LNG Fueling Station**
- **Cost-effective LNG Pump**
- **Standardized Nozzle and Receptacle for LNG Vehicle Fueling**
- **Breakaway for LNG Dispensing Hose**
- **Economical Odorant for LNG fuel**



CNG Infrastructure Program

- **Recommended Practices for CNG Fueling Station Design, Construction, and Operation**
- **CNG Fueling Station Bid Specification Handbook**
- **CNG Infrastructure Technology Exchange**
- **Electronic Access and Billing Network for CNG Fueling Stations**
- **Consistent Fuel Metering Methodology**
- **Enhanced CNG Fueling Nozzles to Avoid Freeze-Up**



Infrastructure Technical Strategy Program

- Continued Operation and Administration of the NGV-IWG
- Leveraging an Integrated OHVT/OTU Infrastructure Program
- Economic and Strategic Assessment of NGV Infrastructure Development



Where the NGV-IWG Goes From Here . . .

- The Leadership Team and GRI have begun drafting final RFPs and procedures for submitting RFPs
- Upon completion of the contract with DOE, GRI and the Leadership Team will
 - Issue RFPs
 - Review proposals and select contractors
 - Issue and monitor contracts
- The NGV-IWG will work on developing a recommendation package for FY2001 to continue its objective of working to overcome obstacles to a sustainable NGV fueling infrastructure